

of the optical system, said optical system including at least an illumination system which irradiates said exposure light onto an original; and

generating said exposure light from said light source to obtain an optical property of said optical system at the wavelength of said exposure light.

12. (Amended) An exposure apparatus which exposes an object with exposure light, comprising:

a light source in which optical components are installed and which generates said exposure light and non-exposure light having a wavelength which is different from that of said exposure light and including at least one of ultraviolet light and visible light;

an optical system disposed on an optical path through which said exposure light passes and including at least an illumination system which irradiates said exposure light onto an original; and

a photo-sensor that receives said non-exposure light from said light source through at least a part of said optical system and output of which is used in adjustment of an optical property of said optical system;

wherein said optical property is adjusted based on the output from said photo-sensor, and said exposure light is generated from said light source to obtain an optical property of said optical system at the wavelength of said exposure light.

17. (Twice Amended) An apparatus according to claim 12, further comprising:

a wavelength selection device disposed between said light source and said optical system to select one of said exposure light and said non-exposure light, emitted from said light source, toward said optical system.

18. (Amended) An exposure apparatus which exposes an object with exposure light, comprising:

an x-ray source that generates x-rays used as said exposure light; and

a light source observation system that forms an image of said x-ray source with light, having a wavelength which is different from that of said exposure light, generated concurrently with said x-rays from said x-ray source to obtain positional information with respect to said x-ray source, said light including one of ultraviolet light and visible light.

19. (Amended) An apparatus according to claim 18, wherein said x-ray source is a laser excitation plasma source that generates said x-rays from a substance by irradiation of a laser beam.

20. (Amended) An apparatus according to claim 18, wherein said light source observation system includes first and second optical systems, which are positioned so as to observe said x-ray source from different directions.

21. (Amended) An apparatus according to claim 18, wherein said light source observation system includes first and second optical systems of which optical axes intersect each other.

23. (Amended) A method of adjusting an exposure apparatus having an x-ray source, which exposes an object with exposure light from the x-ray source, comprising:
generating, from said x-ray source, light having a wavelength which is different from that of said exposure light, said light including one of ultraviolet light and visible light;

adjusting said x-ray source with respect to an illumination system which irradiates said exposure light onto an original, by receiving said light.

24. (Amended) A method of exposing an object with exposure light from an x-ray source, comprising:

adjusting said x-ray source with respect to an illumination system which irradiates said exposure light onto an original, by receiving light, having a wavelength which

is different from that of said exposure light, generated from said x-ray source, said light including one of ultraviolet light and visible light; and

illuminating said original with said exposure light through said illumination system to expose said object with the illuminated original.

25. (Amended) A method of making an exposure apparatus which exposes an object with exposure light, comprising:

arranging an optical system in an optical path through which said exposure light passes, said optical system including an at least illumination system which irradiates said exposure light onto an original;

providing a light source that generates said exposure light and non-exposure light having a wavelength which is different from that of said exposure light and including at least one of ultraviolet light and visible light;

adjusting an optical property of said optical system by receiving said non-exposure light from said light source through at least a part of said optical system; and

adjusting the optical property of said optical system at the wavelength of said exposure light by receiving said exposure light from said light source through at least a part of said optical system.

28. (Amended) A method according to claim 26, wherein said exposure light has a wavelength in a range of 5 to 50 nanometers.

Please add new claims 29-50 as follows:

--29. A method according to claim 1, wherein said exposure light comprises extreme ultraviolet light having a wavelength in a range of 5 to 50 nanometers, and said non-exposure light has a wavelength longer than that of said exposure light.--

--30. A method according to claim 29, wherein said optical property of said optical system is adjusted while an optical path therefor is kept in an atmosphere being substantially the same as atmospheric air.--

--31. A method according to claim 30, wherein said optical system includes at least one of an illumination system which irradiates said exposure light on a pattern and a projection system which projects an image of the pattern on said object.--

--32. A method according to claim 1, further comprising:

adjusting the optical property of said optical system based on said obtained optical property at the wavelength of said exposure light.--

--33. A method according to claim 32, wherein said adjustment of said optical property by receiving said non-exposure light is performed under an atmosphere being different from an atmosphere under which said adjustment of said optical property by receiving said exposure light is performed.--

--34. A method according to claim 33, wherein said adjustment of said optical property by receiving said exposure light is performed while an optical path therefor is kept in a substantial vacuum.--

--35. A method according to claim 33, wherein said exposure light comprises extreme ultraviolet light having a wavelength in a range of 5 to 50 nanometers.--

--36. A method according to claim 1, wherein said optical property of said optical system is adjusted under an atmosphere being different from an atmosphere under which said object is exposed.--

--37. A method according to claim 36, wherein said object is exposed under an atmosphere being different from atmospheric air.--

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--38. A method according to claim 36, wherein said optical property of said optical system is adjusted while an optical path therefor is kept in an atmosphere being different from a vacuum.--

--39. A method according to claim 36, wherein said exposure light comprises extreme ultraviolet light having a wavelength in a range of 5 to 50 nanometers.--

--40. An apparatus according to claim 12, wherein said optical system includes a projection system which projects an image of said original on said object.--

--41. An apparatus according to claim 40, wherein said exposure light comprises extreme ultraviolet light having a wavelength in a range of 5 to 50 nanometers, and said non-exposure light has a wavelength longer than that of said exposure light.--

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--42. An apparatus according to claim 41, wherein said photo-sensor receives said non-exposure light while an optical path therefor is kept in an atmosphere being substantially the same as atmospheric air.--

--43. An apparatus according to claim 12, wherein said photo-sensor receives said non-exposure light under an atmosphere being different from atmosphere under which said object is exposed.--

--44. An apparatus according to claim 43, wherein said object is exposed while an optical path therefor is kept in an atmosphere being different from atmospheric air.--

--45. An apparatus according to claim 43, wherein said photo-sensor receives said non-exposure light while an optical path therefor is kept in an atmosphere being different from a vacuum.--

--46. An apparatus according to claim 43, wherein said exposure light comprises extreme ultraviolet light having a wavelength in a range of 5 to 50 nanometers.--

--47. A method according to claim 23, wherein said x-ray source is adjusted based on an image of said x-ray source formed with said generated light.--